

# UNCLASSIFIED

AD NUMBER
AD836622
NEW LIMITATION CHANGE
TO Approved for public release, distribution unlimited
FROM Distribution authorized to U.S. Gov't. agencies and their contractors; Foreign Government Information; 24 JUL 1964. Other requests shall be referred to Department of the Army, Fort Detrick, MD 21701.
AUTHORITY
AMXFD ltr, 9 Feb 1972

THIS PAGE IS UNCLASSIFIED

AD 836622

TRANSLATION NO. 113 2

DATE: 24 July 1964

DDC AVAILABILITY NOTICE

Qualified requestors may obtain copies of this document from DDC.

This publication has been translated from the open literature and is available to the general public. Non-DOD agencies may purchase this publication from the Clearinghouse for Federal Scientific and Technical Information, U. S. Department of Commerce, Springfield, Va.

AUG

STATEMENT #2 UNCLASSIFIED

This document is subject to special export controls and each transmittal to foreign governments or foreign nationals may be made only with prior approval of Dept. of Army, Fort Detrick, ATTN: Technical Release Branch/TID. Frederick, Maryland 21701

DEPARTMENT OF THE ARMY  
Fort Detrick  
Frederick, Maryland

TOBACCO DOWNY MILDEW (PERONOSPORA TABACINA ADAM.)  
IN POLAND IN 1963

Following is a translation of an article by Franciszek Jankowski of the Central Laboratory of the Tobacco Industry (Centralne Laboratorium Przemyslu Tytoniowego), Crakow, in the Polish-language periodical Ochrona Roslin (Plant Protection), No 12, 1963, pp 5-7.]

The article includes a temporary evaluation of the meteorological conditions in the summer of 1963 in Poland, the course of the tobacco downy mildew epidemic, the situation on tobacco plantation in vegetation, and a short discussion of the prophylactic measures employed.

1. Temporary evaluation of meteorological conditions in the summer of 1963 and their influence on agrotechnical work connected with the growing of tobacco.

Springtime warmth began to show itself in April after rather severe frost in the first ten days of March. In March and April there was rather a substantial amount of sunshine, while there were no strong cold winds, which in spite of late sowing had a good influence on tobacco seedlings in the hothouses. The tobacco seedlings were transplanted to the ground in May under exceptionally good conditions for the most part.

Since the thick cover of snow thawed slowly, the excess water did not flow away to the rivers but remained stored in the soil.

Throughout the country the weather in May was favorable to planting tobacco. The temperature was average, sunshine moderate, and there was substantial frequent rain. June was sunny, moderately warm, with little rain. July was very hot, dry, and sunny.

The first half of August was similarly hot and dry. It was not until the second half of August that it grew cooler and heavy rains fell. In the first half of September, the weather was changeable, moderately warm, and quite rainy. As is characteristic for the summer months (in

most sections of the country) there was no morning or evening fog. It occurred in Southern Poland only in the last few days of August and at the beginning of September; in the North it occurred somewhat earlier. This course of weather was partly responsible for the fact that the vegetation of tobacco was very good. The plants grew quickly and matured normally, so that in July the harvests were already well under way. During the past vegetation season there had been less virus diseases than usual.

## 2. The course of the tobacco downy mildew epidemic in 1963.

The first appearances of the downy mildew were registered 28 May in Kopiec, Augustow Powiat, Bialystok Wojewodztwo (1) on the Mocny Skroniowski variety. The disease appeared in the hothouse, where part of the stricken plants were transferred to the field before the mildew appeared. The diseased plants were destroyed with 4% formaldehyde immediately the disease was confirmed. The second center of disease was discovered 30 May in the same wojewodztwo in the village of Sobolewo, Suwalki Powiat (2), also in the Mocny Skroniowski variety. The diseased plants were destroyed.

In the Lublin Wojewodztwo the first outbreaks on the Janina variety were confirmed on plantations in the locality of Lukowa, Bilgoraj Powiat, on 5 June (3). The plantation was closed down and the plants destroyed.

On 8 June strong infection was noted in one Mocny Skroniowski plantation in the village of Aleksandrowo, Sejny Powiat, Bialystok Wojewodztwo (4). In the Crakow Wojewodztwo downy mildew appeared 12 June on plantations of the Mocny Skroniowski variety in several localities of the Proszowice Powiat (5) and on plantations of the Kentucky 118 variety in the Kazimierza Wielka (6), Kielce Wojewodztwo. On 14 June the appearance of downy mildew was confirmed on plantations of Kentucky variety in Opatow Powiat (7), Kielce Wojewodztwo, and on 25 June it was noted in several localities of Busko (8) Powiat on plantations of the Janina variety.

In all instances the stricken plants were destroyed. During the last ten days of June the disease spread mainly in the wojewodztwos of Bialystok, Crakow, and Kielce. At the end of June single outbreaks of mildew were noted in the Nysa Powiat (9) of the Havana variety and in the Wolow Poviast, Wroclaw Wojewodztwo. Also at the end of June outbreaks were noted on Mocny Skroniowski plantations in Radziejow Powiat (10), Bydgoszcz Wojewodztwo, and soon afterwards single outbreaks were noticed in the powiats of Mogilno, Swiecie, and Grudziadz.

At the end of June two outbreaks were also noted in Lezajsk Powiat, Rzeszow Wojewodztwo. In the first ten days of July the disease spread to numerous plantations in almost all powiats in the Crakow,

Augustow, and Jedrzejow regions.

Far fewer plantations were infected in the Lezajsk and Grudziadz regions and in the southern part of the Crakow region (Silesia). Infection of plantations was generally low. In the second and third decades of July the disease spread little, as the result of dry hot weather and the prophylactic measures employed on the plantations. It was only the lower leaves that were infected, and only a few plantations located in humid low-pressure areas were greatly infected. Up until the middle of August the Central Laboratory received no reports of any substantial increase in epiphytism or great plantation damage. By this time the central leaves had already been gathered.

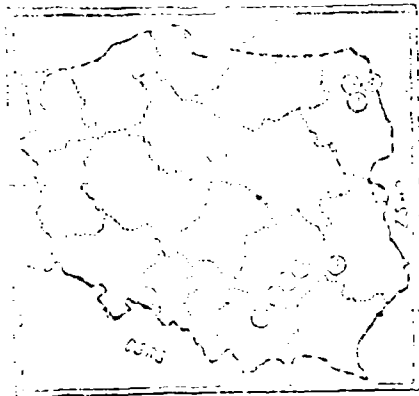
In each region of cultivation the number of plantations hard hit was between several score to several hundred. It was not until after the rains and cooling in the second decade of August that reports of greater spreading of the disease were received. Epiphytic outbreaks grew most greatly in the eastern and southeastern wojewodztwos (Lublin and Rzeszow), especially in the powiats of Zwierzyniec, Zamosc, Bilgoraj, Tomaszow Lubelski, and Lezajsk. During this period about 40% of the plantations in the Lezajsk region were subject to mild infection.

As in previous years light tobacco was hit more strongly (Flandria, and Virginia), although in individual cases the heavier tobaccos, Mocny Skroniowski and Pionier, were also greatly infected.

Autumn epiphytic damage in the southern and eastern regions, where light tobacco mainly is cultivated, worsened the quality of the upper leaves. In Connection with the outbreaks in the Lublin region, plantation spraying, which had been discontinued, was begun again. No greater damage was noted in heavier tobaccos in the autumn.

### 3. Prophylactic action in hothouses and on plantations.

Prophylactic action consists of systematic spraying of the seedlings in the hothouses with 0.4% Ferbam Zineb (twice a week) and plantation spraying with 0.4% Zineb and 0.2% Polyram (Meneb) every 7-10 days. As the result of the lack of rain in July, the deposit of the liquid on the leaves remained a long time, which is why the remedies applied were far more effective than in other more humid years. The plants from the first outbreaks of infection were destroyed with 4% formaldehyde or buried deep in the ground.



Caption under map: First outbreaks of tobacco downy mildew in 1963.

- END -